



Michigan Department of Agriculture

Food and Dairy Division

Annual Report Fiscal Year 2007

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Food and Dairy Division
2007 Annual Report

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 MDA Food Section

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Introduction

Once again, the Food and Dairy Division staff was challenged in fiscal year (FY) 2007 with ensuring a safe food supply for Michigan citizens – and they rose to the challenge! Even in tough budgetary times, with restrictive policies, and scarce resources, we were able to work with our key partners to leverage our collective resources for the good of Michigan citizens.

Our vision, honed in FY 06, continues to focus on the most critical elements of our mission:

1. A seamless, integrated food protection and defense system that incorporates a strong surveillance component with effective, all-hazards emergency response capability.
2. Staff that are well-trained, well-informed, and have the necessary expertise to proactively solve problems.
3. A strong, effective infrastructure including information technology hardware and systems, documented procedures, and an operational structure supporting the objectives.
4. The use of effective, creative solutions in performing our work.

After two years of collaboration with local health departments and the Michigan State Police on imported and specialty foods, we were able to persuade the U.S. Food and Drug Administration (FDA) to recognize our state and local food safety programs as an integral part of the national food safety and defense system. A “seamless food safety and defense system” involves partnership, communication and intelligence sharing, and a commitment to a common vision. No one level of government has the resources to perform all of the critical food safety work, but working together we can accomplish a lot more than the sum of the parts.

One of the important components of our food safety infrastructure is the policies that are used by state and local food inspectors and sanitarians. Working collaboratively, the Michigan Food Law of 2000 was updated to adopt the most recent FDA Model Food Code incorporating several added measures of protection for Michigan citizens. Some of these new elements include:

- Creating a requirement that most food service establishments employ managers who have been certified.
- Clearer guidance on when to exclude or restrict an ill employee from work and when to allow an employee to return to work.
- Requiring food managers to demonstrate knowledge of the control of food allergens.
- Tightening controls on bare hand contact with food to prevent the spread of disease.
- Utilizing a risk-based approach to inspection that actively engages food managers.

I have highlighted just a few important accomplishments from FY 07 that helped us in our journey toward reducing the risk of foodborne illness in Michigan and focusing on continuous improvements to our program. Many thanks are due to all of our partners in government, private industry, trade associations, consumer interests, and universities. With your continued support, we will remain focused on this important mission.



Katherine Fedder, Director
Food and Dairy Division

PART A - Food Program Summary

Michigan's food service establishments, grocery and convenience stores, food processors, and food warehouses are regulated by the Food Section of the Food and Dairy Division, in partnership with Michigan's local health departments. The Food Section works with a variety of corporate, regulatory, consumer, and academic partners to assure the food produced, distributed, and sold in Michigan is safe. By working closely with these partners, the Food Section has been able to identify and resolve public health issues relating to food safety in a timely manner.

I. Food Inspection

Direct Food Inspection Program

Approximately 49 Michigan Department of Agriculture (MDA) field staff conducted regular inspections of grocery and convenience stores, food processors, farmers' markets, temporary and fair food operations, and food warehouses, ensuring a safe food supply and informing consumers of recalls and other foodborne illness outbreaks. MDA staff perform plan reviews, conduct inspections, process license applications, take enforcement actions, and investigate complaints. The division also works closely with various industry segments, such as grocers, wine, cider and honey makers, venison and maple syrup processors, growers, and farmers' market operators. Other programs include conducting Food and Drug Administration (FDA) and United States Department of Agriculture (USDA) contract inspections, registration and inspection of bottled water manufacturers, and providing certificates of free sale for firms exporting foods around the world.

Accomplishments

Major accomplishments of the food program in FY 07 include:

- The **Food Law/Food Code Update** Workgroup, established in 2006, completed its draft of revisions to Michigan's Food Law, including the proposed adoption of the 2005 FDA Food Code. These laws were passed in October 2007.
- A **Country of Origin Labeling Program (COOL)** was initiated in cooperation with USDA to ensure citizens have food source information for certain foods.
- The **Interstate Food Transportation Project**, in cooperation with the Michigan State Police, continued to identify and destroy contaminated food product being brought into Michigan destined for stores and restaurants. The project was also regionalized to include Ohio, Illinois, and Indiana. MDA and the overall project members received an award from FDA for this effort.
- The **Gateway Strategy** – a comprehensive, regionalized plan to partner with federal and state agencies to protect Michigan's food supply – was developed. One piece of the strategy was implemented with the signing of a FDA contract to assist with import food monitoring.
- MDA responded to 97 food **recall** incidents – an all time high. Staff conducted 1,033 recall effectiveness checks on one recall alone.
- A **Food Communication Plan** was put into place, ensuring a mechanism to communicate during emergencies with staff and partners.
- Michigan hosted the **North Central Association of Food and Drug Officials Conference** in Grand Rapids.

Projects

Foodborne Illness Risk Reduction Initiative:

Regulators continued working with industry to promote active managerial control of food safety and reduce the major foodborne illness risk factors, such as proper holding temperatures and personal hygiene. Activities in 2007 included: finalizing updates to Michigan's Food Law, the development of new tools for use by regulators, including interactive inspection and risk-based inspection guides, and training/standardization of staff.

Emergency Response:

Activities included: creation of an emergency response manual, completion of model emergency press releases, and an extensive electronic directory of contact information for staff and other key individuals. The Food Section also began the distribution of MDA's "Emergency Action Plan for Retail Food Establishments" (EAP) to approximately 40,000 establishments. Michigan Public Health Institute partnered with MDA to survey the effectiveness of the plan during actual emergencies. The results from our industry partners showed that when asked how the EAP helped during an emergency incident, establishments responded:

How did the EAP help during the specified emergency incident? (N=21)

Saved time	76% agreed
Less economic cost	38% agreed
Able to stay open or reopen sooner	67% agreed
Allowed for better interaction with regulator	62% agreed
Less stressful	67% agreed

Ethnic Food Establishments:

MDA partnered with Michigan State University to develop tools to meet the needs of ethnic food establishments.

Inspections:

Completed 95 percent of high-risk inspections on time or early and began exploring the use of third-party inspections in the food and food service programs.

FDA Voluntary Retail Program Standards:

The division is continually working to meet these nine voluntary national food program standards through its internal food inspection program. Two of the nine standards were met this year:

Standard 1 - Regulatory Foundation

Standard 7- Industry and Community Relations

Farmers' Markets:

MDA worked with the newly created Michigan Farm Market Association to develop materials to assist markets with licensing and food safety as well as conducted surveys of existing farm markets.

WORKLOAD

Licensed Establishments	2005/06	2006/07
Retail Food Establishment	12,796	14,041
Extended Retail Food Establishment	939	924
Wholesale Food Processor	529	581
Limited Wholesale Food Processor	754	893
Food Warehouse	1,004	1,075
Mobile Food Establishment	52	51
Mobile Food Establishment Commissary	42	49
State/County Fair Temporary	1,146	1,012
Special Transitory Food Unit	42	44
Temporary Food Establishment	19	25
Total Licensed Establishments	17,323	18,695
Number of licensed establishments per FTE* assigned to conduct inspections	385	382

WORKFORCE

	MDA Actual	FDA Recommended**
Number of FTEs assigned to conduct food inspections (all types)	49	71-81
Number of FTEs involved in technical support, management and administrative support	31.5	NA
Total Number of FTEs	80.5	NA

*Full Time Employee

**FDA Recommended number from FDA Voluntary Program Standard

PROGRAM OUTPUT

I. Inspections

Inspection Type	Inspections Conducted	% of Total Inspections	Inspections Due
Routine	11,088**	60%	13,673
Ad-hoc*	4,503	25%	N/A
Follow-up	1,737	9%	1,776
Fair	1,012	6%	1,012
Grand Total	18,340	100%	16,461

Product samples tested 545

Average number of inspections per FTE assigned to
conduct food establishment inspections 374

*Ad hoc inspections: Includes inspections for new establishments, inspections associated with complaints, and any other inspections initiated by the inspector outside of routine or follow-up inspections.

**Ad hoc inspections often conducted in lieu of routine inspections, thus a number of ad hoc inspections completed fulfill part of the 13,673 routine inspections due. MDA focuses time and resources on highest risk establishments.

II. Plan Review

Number of plans received for review	246
Number of plans approved	246

III. Investigations

Consumer complaints investigated (all types)	1,154
Illness-related	98
Non-illness related	1,056

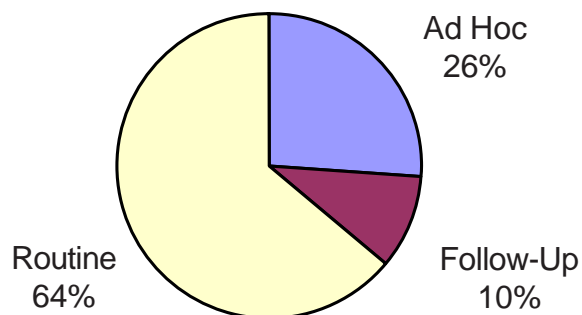
IV. Enforcement

Enforcement Letters	322
Compliance Reviews	11
Consent Agreements/Administrative Fines	133/\$34,440
Prosecutions/Fines	2/\$2,710
Seizures	880
Dollar Amount of Seized Product	\$3,310,725
Informal Hearing	1
Formal Hearing	1
Reinspections/Fees	161/\$9,660

V. Miscellaneous

Certificate of Free Sale	1,580
Freedom of Information Act Requests	95
Bottled Water Registrations	1,880

Michigan Food Program Inspections by Type



FUNDING SOURCES

	FY 05/06	FY 06/07
Fees	\$2,451,625	\$2,202,003
Federal/Special Revenue funds	\$366,610	\$469,445
General fund	\$4,810,677	\$5,626,770
Total program revenue	\$7,628,912	\$8,298,218

GENERAL STATISTICS

Occurrence per 100,000 population

Number of fixed food establishments*	173
Food related complaints	11

Program Dollars Spent Per

Licensed establishment	\$444
FTE assigned to the program**	\$103,083
Michigan citizen (Total Program Revenue)	\$0.82
Michigan citizen (General Fund)	\$0.56
Michigan citizen (Licenses Fees/Others)	\$0.26

* Fixed food establishments include retail food stores, food processors and food warehouses.
Michigan population est. – 2004 estimates, U.S. Census Bureau.

** This number includes Lansing office staff that provides statewide program support.

II. Food Service – Local Health Departments

Local Health Department Food Service Program

Food safety in Michigan's restaurants is a collaborative effort between MDA and the state's 45 independent local health departments. MDA provides statewide program policy, direction, consultation, and training services to local health department sanitarians. Local health departments perform plan reviews, conduct inspections, process license applications, take enforcement actions, investigate complaints, and conduct foodborne illness outbreak investigations. Local health department performance is evaluated every three years in conjunction with the "Michigan Local Public Health Accreditation Program." The accreditation program helps to assure accountability for the more than \$8.3 million in state funds utilized for the Food Service Program. With the addition of locally set fees and local tax contributions, local health departments operate a \$28.3 million overall food service program.

Accomplishments

Major accomplishments of the food service program in FY 07 include:

- 19 local health departments completed successful accreditation reviews with a 96 percent degree of compliance with program standards.
- 30 local health department trainers were standardized by the Food Service Program's FDA-certified trainers. This program promotes consistent and focused inspection for food service establishments across the state.
- 688 hours of training was provided by MDA to local health departments.

Projects

FDA Voluntary Retail Program Standards:

The division is continually working to encourage local health departments to enroll and strive to meet the nine voluntary national food program standards. To assist local health departments wishing to enroll, an assessment of local health compliance with the retail standards was completed and a resource web page was established.

Local Health Department/MDA Partnership Survey:

A survey of MDA and local health department staff was completed to establish a baseline and help determine areas where state/local relationships can be improved.

WORKLOAD

Licensed Establishments	2005/06	2006/07
Fixed Food & Mobile Commissary	31,168	31,704
Temporary	11,545	10,870
Mobile	459	531
Vending	5,015	4,689
Special Transitory Food Unit (STFU)	645	688
Total Licensed Establishments	48,832	48,482

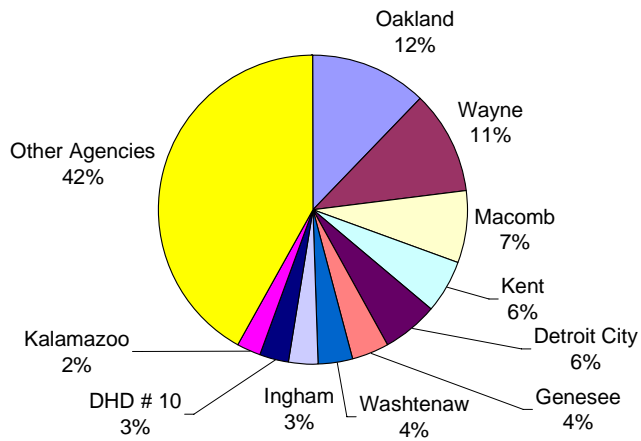
Number of licensed establishments per FTE**

assigned to conduct inspections	253	253
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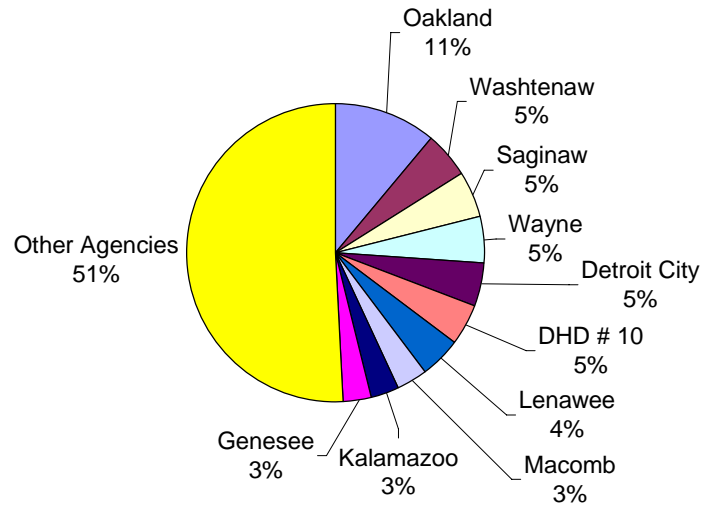
**FTE = Full time equivalent Licensing data from MDA License 2000 System

Distribution of License Types by Local Health Department

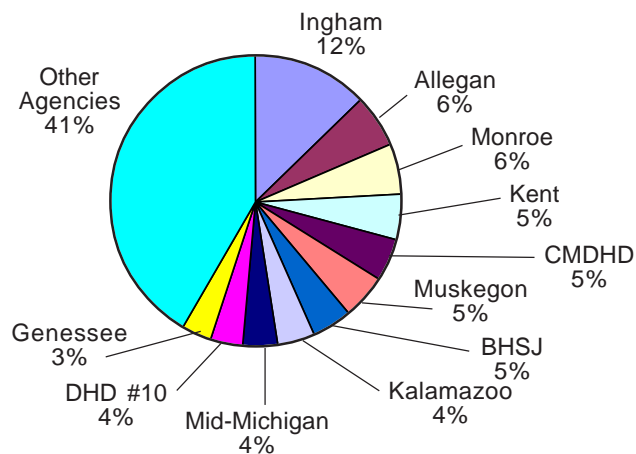
Fixed Licenses



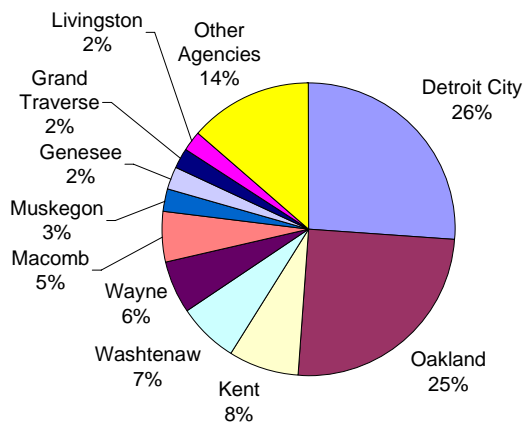
Temporary Licenses



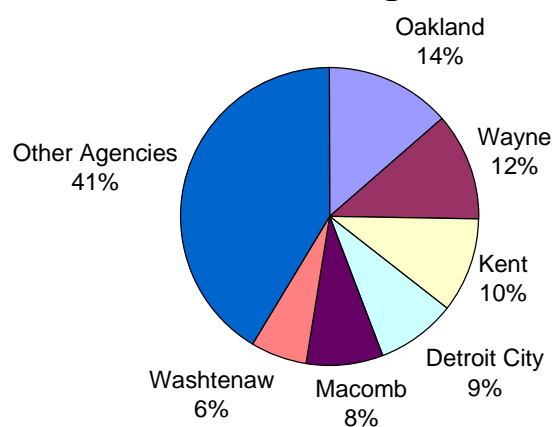
Special Transitory Food Unit (STFU) Licenses



Mobile Licenses



Vending



WORKFORCE

	LHD Actual	FDA Recommendation	
		Minimum	Recommended
Number of FTEs assigned to conduct food establishment inspections (all types)	191	204	287
Number of FTEs involved in plan review, management and administrative support	112	NA	NA
Total Number of FTEs	303	NA	NA
Number of standardized trainers	61	NA	NA

PROGRAM OUTPUT

I. Inspections

Establishment Type	Inspections Conducted	% Total Inspections	Inspections Due
Fixed food service – routine	58,265	62%	
Mobile, Vending, STFU	5,035	5%	
Sub-Total	63,300	67%	62,906
Follow-up inspections	19,916	21%	
Temporary food service	10,870	12%	
Grand Total	94,086	100%	

Average number of inspections per FTE assigned to conduct food establishment inspections 492

II. Plan Review

Number of plans received for review 2,288

Number of plans approved 1,770

III. Investigations

Consumer complaints investigated (all types) 5,010

Foodborne illness outbreaks (met MI definition) 247

IV. Enforcement

Administrative action (office conference, informal hearing, formal hearing, civil fine, order) 1,437

Court action (civil, criminal) 3

FUNDING SOURCES

	FY 05/06	FY 06/07
Fees collected by local health department*	\$ 10,052,398	\$11,687,057
Local tax dollars*	\$ 8,667,427	\$8,359,820
State dollars – local public health operations (LPHO)*	\$ 8,249,562	\$8,345,613
Total local health program revenue	\$ 26,969,387	\$28,392,490

*Source: Michigan Department of Community Health, Comprehensive Planning and Budgeting Contracts

GENERAL STATISTICS

Occurrence per 100,000 population

Number of fixed food service establishments	314
Food related complaints	50
Foodborne illness outbreak investigations	2.4

Program Dollars Spent Per

Licensed establishment	\$755
FTE assigned to the program	\$93,612
Michigan citizen (Total Program Revenue)	\$2.81
Michigan citizen (Fees collected by LHDs)	\$1.16
Michigan citizen (Local tax dollars)	\$0.83
Michigan citizen (LPHO/state dollars)	\$0.83

Michigan population est. – 2004 estimates, U.S. Census Bureau

PART B – Dairy Program Summary

Dairy inspectors in the Food and Dairy Division carry out a clear mission: ensure safe and wholesome dairy products for consumers. Michigan boasts 2,414 dairy farms – 2,133 Grade A farms and 281 manufacturing farms. In addition, the Dairy Section licenses and inspects more than 71 Michigan dairy processing plants. Enforcement is a strong component of the Dairy Section's work. Law violations resulted in 159 dairy farm permit suspensions resulting in removal of 2,304,779 pounds of suspect milk from the market with an estimated dollar value of \$440,904.

Accomplishments

Major accomplishments of the dairy program in FY 07 include:

- **Dairy Law Update:** The Dairy Law Update Workgroup, which is a broad-based group of approximately 25 dairy industry stakeholders including: milk producer cooperatives, dairy processors, Michigan Farm Bureau, and Michigan State University (MSU) Extension, met several times over the past year to discuss and develop amendments to the laws. The major focus of the current law update is to adopt the latest revision of the Grade 'A' Pasteurized Milk Ordinance (PMO), which is the milk safety standard for all 50 states. The workgroup also reviewed the Dairy Section's recombinant bovine somatotropin (rbST) labeling policy. The consensus of the workgroup was this policy would be useful as a guidance document for members of the dairy industry wishing to voluntarily label their milk and milk products from cows that have not been treated with rbST.
- **2007 National Conference on Interstate Milk Shipments:** The 31st National Conference on Interstate Milk Shipments was held from May 5-10, 2007 in Salt Lake City, Utah. More than 300 people from across the United States attended this year's conference in addition to members of the dairy industry from Canada, Columbia, Costa Rica, Germany, Mexico, New Zealand, and the Netherlands. One hundred and five proposals to update the PMO and other conference documents were submitted for consideration. Dairy Section staff play a key role in this national conference.

Projects

Cow Share and Fresh Unprocessed Whole Milk Meetings:

Brought together by Michigan Food and Farming Systems, this group of stakeholders, including cow share farmers, MSU staff, Michigan Milk Producers Association, and MDA is considering various aspects of raw milk consumption and cow sharing to address the question, "Where do we want to be in three to five years on access to fresh unprocessed whole milk?"

Enforcement:

The Dairy Section held a total of 29 compliance meetings this fiscal year. The compliance meetings included Grade A dairy farms, manufacturing dairy farms, and one Grade A dairy plant. Various issues were addressed, including: equipment and facility cleanliness, and illegal somatic cell counts. Permit holders were given the opportunity to explain the causes of these conditions. As a result, recommendations for corrections were discussed and implemented. In addition to the compliance meetings, an informal hearing was held on March 2, 2007 to address dairy permit violations on a west Michigan farm. The compliance issues included cattle cleanliness, protection from contamination of the milk, and poor milk quality. An action plan was discussed with the producer and dates established for specific action to be taken. The producer agreed to make the necessary changes to maintain permit requirements.

Avian Influenza Protocol Meetings:

The purpose of the meetings was to develop and distribute an avian influenza protocol for dairy farms. Dairy industry representatives as well as MDA staff developed a placard with avian influenza information and guidelines that is being distributed throughout Michigan.

WORKLOAD

Licensed Establishments	2005/06	2006/07
Farms	2,529	2,414
Grade A Plants	30	31
Manufacturing Plants (includes cheese and ice cream)	42	40
Grade A Milk Distributors	12	11
Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning	12	14
Grade A Single Service	6	6
Milk Tank Trucks and Can Milk Trucks	480	541
Milk Transportation Companies	122	121
Milk Hauler/Samplers (currently licensed)	644	542
Certified Fieldpersons	28	27
Total Licenses	3,905	3,747

Labs Approved/Certified

Certified Industry Labs	8
Approved Drug Screening Sites	35
Certified Commercial Labs	2
Approved/Certified Industry Analysts	235
Number of licensed establishments per FTE assigned to conduct inspections	230
	220

WORKFORCE

MDA Actual

Number of FTEs assigned to conduct dairy inspections (dairy, farm & plant inspections, and pasteurization evaluations)	17
Number of FTEs involved in management, technical support and administrative support	9
Total Number of FTEs	26

PROGRAM OUTPUT

I. Inspections and Evaluations

Inspection Type	Inspections Conducted
Farm	6,227
Plants	313
Hauler/Sampler/Tanker	754
Pasteurization	435
USDA Survey*	16
Total Inspections	7,745

*USDA survey number does not include 460 USDA butter grading certificates issued.

Grade A Survey	69
Laboratory Analysts Evaluated	66
Laboratories Evaluated	8
Drug Residue Screening Sites Evaluated	15
Shelf life samples	165
Total milk & milk product samples taken	4,120
Total milk & milk product test determinations	10,540
Average number of inspections per FTE assigned to conduct dairy establishment inspections	456

II. Investigations

Consumer complaints investigated (all types)	19
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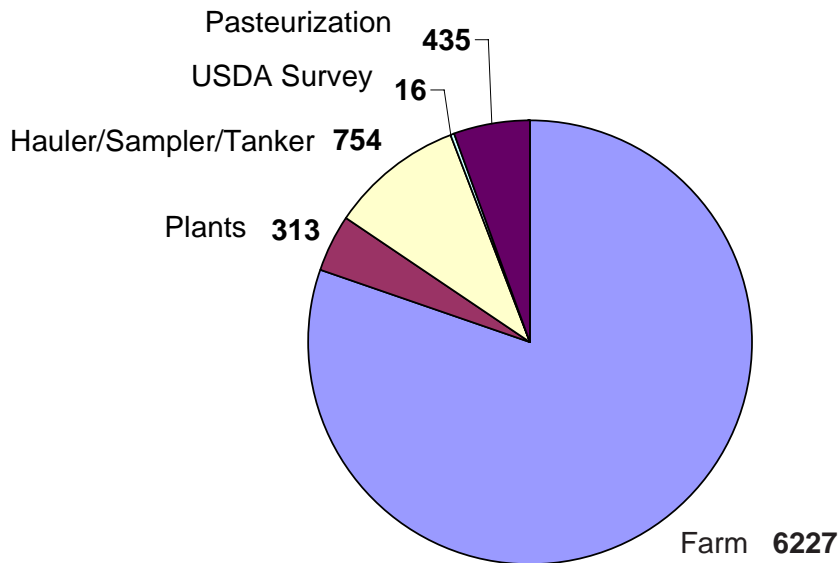
III. Enforcement

Enforcement Letters	495
Informal Hearing/Compliance Reviews	30
Drug Residue Fines collected by MDA	\$6,000
Prosecutions	0
Seizures	1
Dollar amount of seized products	\$0 (product released)
Total Permit Suspensions	159
Total Pounds of Contaminated Milk Disposal	2,304,779 (\$440,904)

IV. Miscellaneous

Certificate of Free Sale	157
Freedom of Information Act Requests	88

Number of Inspections by type, performed by the Michigan Dairy Program



FUNDING SOURCES

	FY 05/06	FY 06/07
Fees collected by MDA	\$62,075	\$41,630
Special Revenue Funds	\$23,023	\$24,250
General funds	\$2,707,523	\$2,913,577
Total program revenue	\$2,792,621	\$2,979,457

GENERAL STATISTICS

Occurrence per 100,000 population

Number of dairy farms	24
Number of dairy manufacturers	1

Program Dollars Spent Per

Licensed establishment	\$795
FTE assigned to the program*	\$114,595
Michigan citizen (Total Program Revenue)	\$0.295
Michigan citizen (General Fund)	\$0.288
Michigan citizen (License Fees/Other)	\$0.0065

*This number includes Lansing office staff that provide statewide program support
Michigan population est. – 2004 estimates, U.S. Census Bureau.

PART C – Foodborne Illness Outbreaks And Food Recalls

MDA maintains a database of reported illness incidents meeting the Michigan definition of a foodborne illness outbreak. This comprises incidents involving two or more cases, not of the same household, who have ingested a common food and have similar symptoms, or incidents involving the same pathogen. Also included are single incidents of certain rare foodborne pathogens (based on the definition in the Michigan Food Law, P.A. 92 of 2000, Section 3103). Current guidance for local health departments on foodborne illness outbreak reporting is available on the web:

http://www.mda.state.mi.us/industry/fooddata/FSSS/0603_FBI_MPR.pdf

I. Overview of Foodborne Illness Outbreak Results

A total of **247** events meeting the Michigan definition of a foodborne illness outbreak were reported by local health departments to MDA. Gastrointestinal illness can be transmitted by several means, including:

- Person to person contact
- Animal to person contact (zoonotic)
- Consumption of contaminated water
- Consumption of contaminated food

Although ill individuals in reported outbreaks shared common food sources, it was often not possible to rule out other routes of illness transmission – particularly in smaller incidents. Of the 247 potential foodborne illness outbreaks, local health departments identified a total of 26 incidents as probable foodborne illness outbreaks after complete investigation. This number is low due to indeterminate conclusions or lack of conclusions stated in final reports.

Total of potential foodborne illness outbreak complaints: 247 (2,162 illnesses)

Total number of probable foodborne illness outbreak complaints: 26 (725 illnesses)

Median number of illnesses per probable foodborne illness outbreak: 8.5

Leading causative agents in probable foodborne illness outbreaks:

Scombroid 4

Norovirus 3*

Percentage of time causative agent identified in all reported potential outbreaks: 11%

*Norovirus was confirmed in 13 different events, but investigations concluded that only three of the 13 were likely or definitely food-related outbreaks.

II. Food Recalls

In FY 07:

97 food recall incidents

1,465 recall audit checks

1,142 staff hours

This represents a 56 percent increase in the number of Class I recalls from FY 06. Since MDA receives no compensation from industry or federal authorities for its regulatory action during recalls, the increased need for response prompted MDA to examine its current processes to better plan for resource allocation.

- Because of resource limitations and occasional problems with retailers not removing recalled, potentially harmful products from the shelves in a timely manner, MDA drafted a three-tiered response guide. This new guidance allows MDA to quickly determine what level of response is warranted based on public health risk and federal requests for assistance.
- Using this new risk-based assessment system, two nationwide recalls early in 2007 utilized the Rapid Response level criteria for quickly surveying whether retailers were pulling recalled product from the shelves. During these two recalls, a total of 281 contacts were made to retailers within a 24-hour period to verify compliance with industry recall directives.

Noteworthy recalls of FY 07:

Peter Pan/Great Value peanut butter - *Salmonella tennessee*

- Multi-state outbreak in 47 states (628 cases, 16 cases in Michigan).
- Sparked recall of 360 million pounds of peanut butter and peanut butter products in the U.S. and 60 other countries.

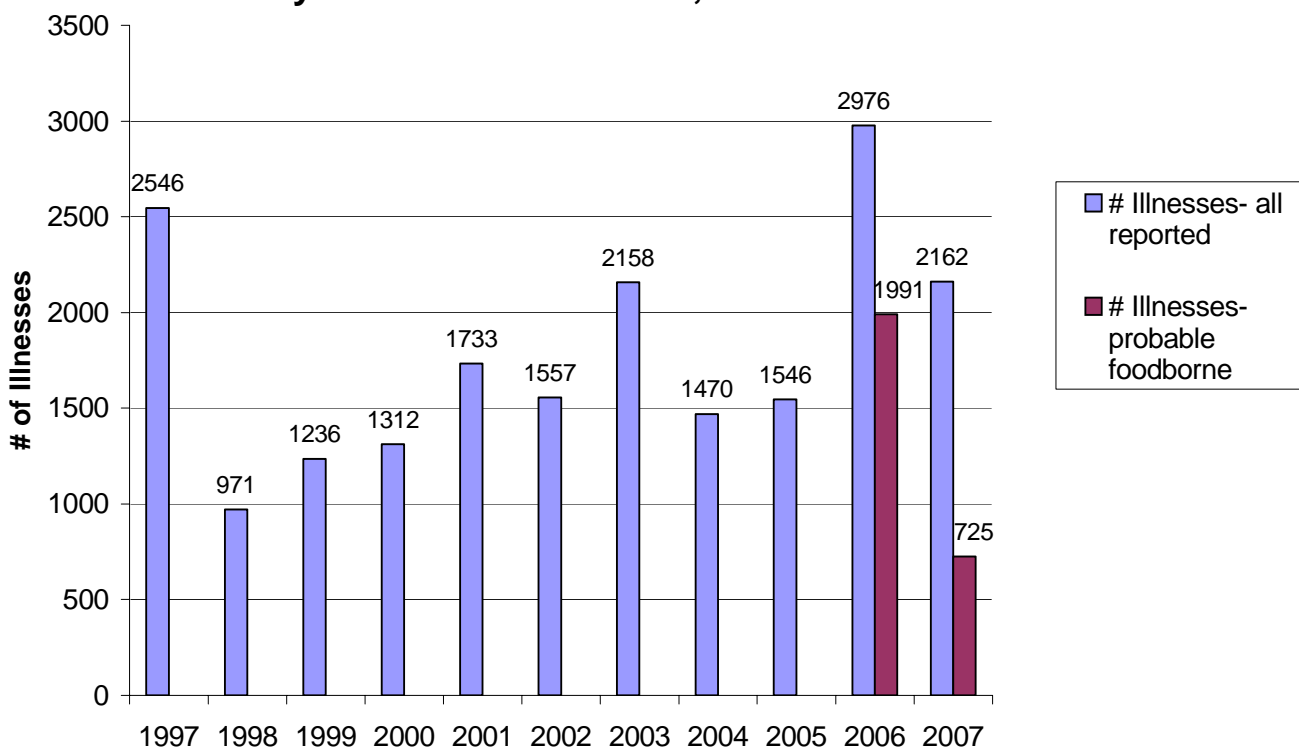
Davis Creek Meats – *E. coli* O157:H7

- Two illnesses in southwest Michigan were associated with consuming ground beef purchased at a Gordon Food Service retail outlet.
- Product was traced back to Davis Creek Meats, a Michigan processor.
- Testing of product left from a patient's freezer initiated a recall of 129,000 pounds of ground beef shipped to foodservice distribution centers and marketplace stores throughout 11 states.

Canned meat and non-meat products – *Clostridium botulinum* (Botulism)

- A multi-state outbreak of botulism was traced to canned goods produced by Castleberry Foods in Georgia.
- Recall encompassed nearly 90 different products (and four pet food products) sold under 26 different brand names.
- MDA inspectors conducted 1,033 on-site audit checks across the state.

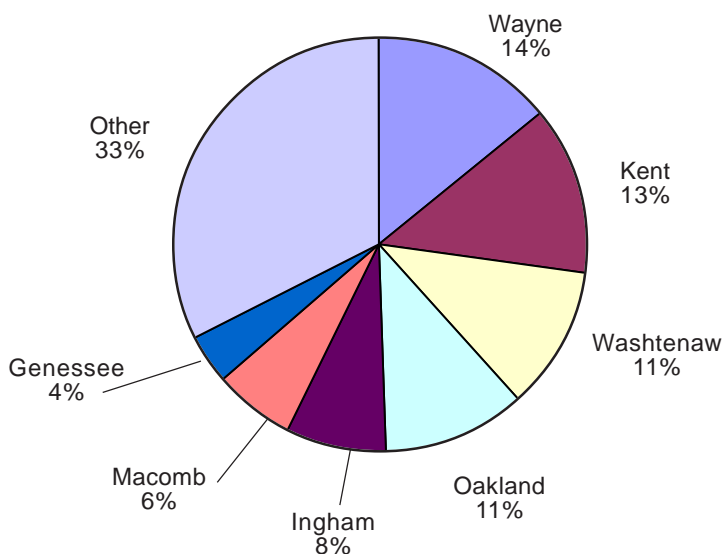
Ten-Year Summary of Foodborne Illness Outbreaks, by Number of Illnesses, 1996-2007



Note: Statistics prior to 2002 were based on the calendar year rather than on the fiscal year.

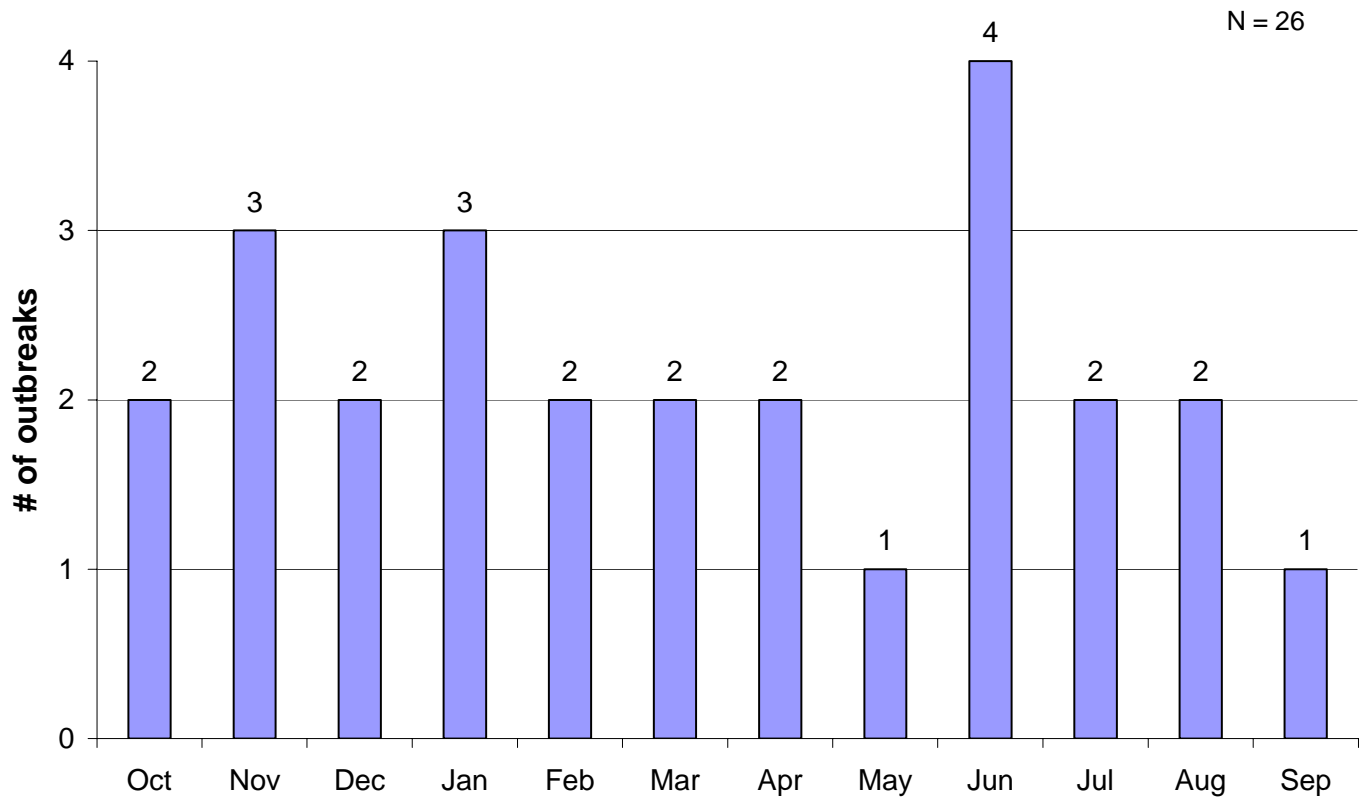
Foodborne Illness Outbreaks by Local Health Department

N = 247

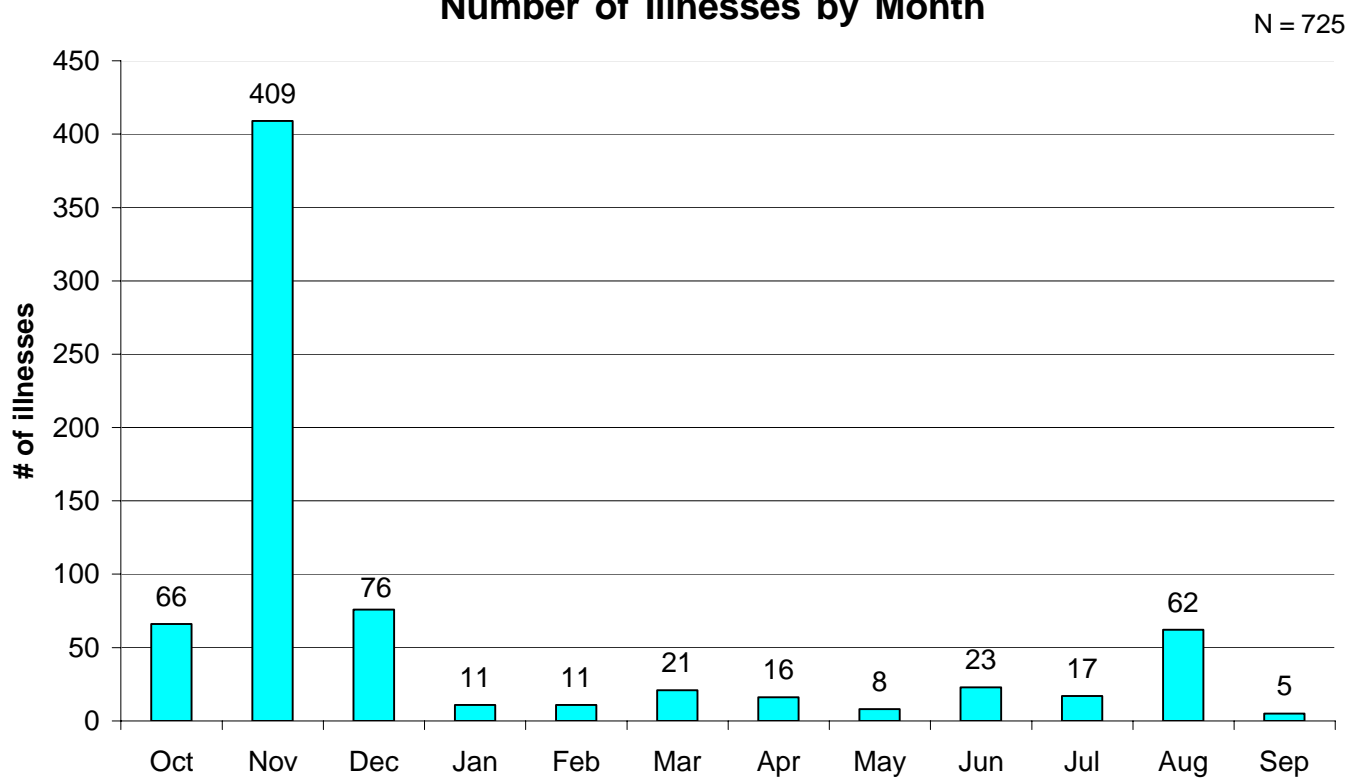


Note: Data cannot be interpreted as indicator of the relative safety of foods in any jurisdiction. Health departments with larger populations would be expected to have larger numbers of outbreaks.

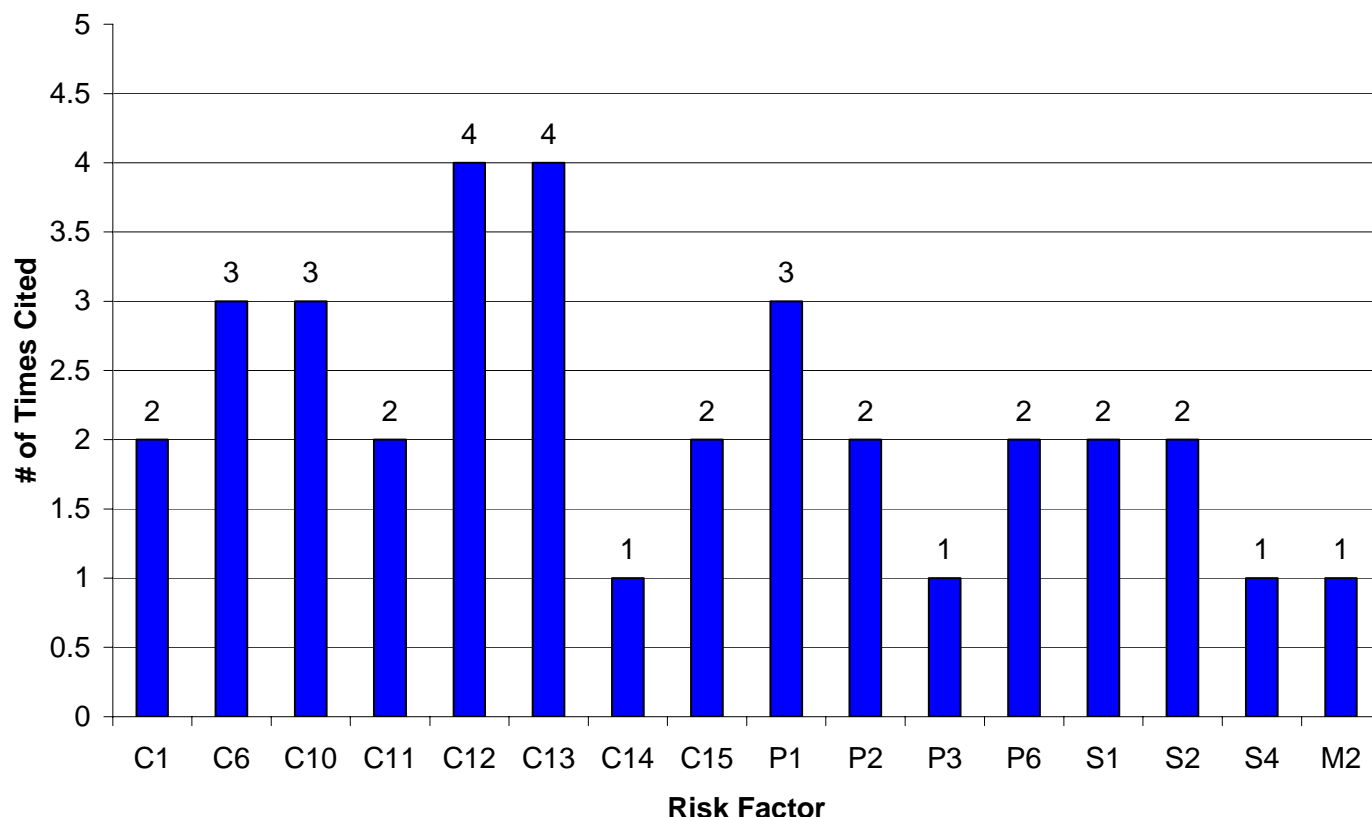
Probable Foodborne Illness Outbreaks, Number of Events by Month



Probable Foodborne Illness Outbreaks, Number of Illnesses by Month



CDC Risk Factors Reported, Fiscal Year 2007



Key: Partial list of risk factors, from CDC form 52.13

C1	Toxic substance part of tissue
C6	Raw product/ingredient contaminated by pathogens from animal or environment
C10	Bare-handed contact by handler/worker/preparer (e.g., with ready-to-eat food)
C11	Glove-handed contact by handler/worker/preparer (e.g., with ready-to-eat food)
C12	Handling by an infected person or carrier of pathogen
C13	Inadequate cleaning of processing/preparation equipment/utensils
C14	Storage in contaminated environment
C15	Other source of contamination
P1	Allowing foods to remain at room or warm outdoor temperature for several hours
P2	Slow cooling
P3	Inadequate cold-holding temperatures
P6	Insufficient time and/or temperature during hot holding
S1	Insufficient time and/or temperature during initial cooking/heat processing
S2	Insufficient time and/or temperature during reheating
S4	Insufficient thawing, followed by insufficient cooking
M2	Solid masses of potentially hazardous foods

I. MDA Recommendations for Regulators conducting Food and Dairy Inspections:
Emphasize exclusion and/or restriction of ill food handlers, discussing risk of transmission and the health and financial consequences that could ensue.

- Focus on finding and eliminating unsafe food handling practices that are highly associated with foodborne illness during routine food safety inspections.
- Review handwashing and glove-use procedures.
- Evaluate cleaning and sanitizing practices for food equipment and utensils.

II. MDA Recommendations for Local Health Departments:

- In final reporting and termination reports for outbreaks, give a conclusion stating whether or not the outbreak was deemed foodborne based on investigation findings.
- Submit completed Centers for Disease Control (CDC) 52.13 forms with all events deemed probable foodborne illness outbreaks.

III. Foodborne Illness Outbreak Reporting by Local Health Departments:

- MDA uses foodborne illness data to:
 - Investigate emerging threats,
 - Illustrate trends, and
 - Ensure accurate reports are reflected at the state and national level.
- Final reports were received for 96 percent of reported potential foodborne illness outbreaks.
- Accreditation findings show 100 percent of local health departments were found to respond to a foodborne illness complaint within 24-hours of notification (Minimum Program Requirement 19), and 91 percent met foodborne illness investigation procedure requirements relating to documentation and reporting of foodborne illness outbreaks (Minimum Program Requirement 20).

APPENDIX I- Workload Data by LHD

FY 06/07 Workload – Output

Michigan Local Health Department Quarterly Reports Summary, 2007										
	INSPECTIONS CONDUCTED					INSPECTIONS DUE	PLAN REVIEW		INVESTIGATIONS	
	3. Fixed food establishments	4. Mobile, vending & sfu	5. Temporary food establishments	6. Follow-up inspections	Total Number of Inspections Conducted (all inspection types)	7. Fixed, mobile, vending & sfu inspections due (annual total)	8. Number of plans received for review	9. Number of plans approved	10. Consumer Complaints Investigated	Number of Consumer Complaints per 100,000 People
Allegan	526	60	70	58	714	595	9	11	4	3.80
BEDHD	943	51	165	108	1,267	994	35	35	112	67.30
Bay	685	12	133	116	946	720	15	17	38	34.71
Benzie-Leelanau	318	5	148	127	598	290	5	5	9	22.71
Berrien	1,185	45	300	174	1,704	1,154	23	14	87	53.33
BHSJ	958	157	242	182	1,539	1,071	18	10	73	46.53
Calhoun	731	73	196	186	1,186	804	25	25	77	55.37
CMDHD	1,281	56	281	267	1,885	1,405	41	39	94	49.28
Chippewa	318	8	41	50	417	406	4	5	71	183.03
Delta-Menominee	435	24	181	505	1,145	460	10	10	24	37.76
Detroit City	2,565	445	510	757	4,277	3,558	74	59	79	8.78
Dickinson-Iron	382	12	51	102	547	379	11	11	18	45.08
DHD # 2	349	7	173	35	564	564	10	12	24	34.39
DHD # 4	686	20	92	183	981	695	30	25	26	31.39
DHD # 10	1,552	146	490	252	2,440	1,698	51	37	84	31.63
Genesee	2,229	194	314	227	2,964	2,827	56	56	295	66.45
Grand Traverse	673	67	62	56	858	858	38	25	45	54.38
Holland City*	244	118	62	163	587	43	276	9	38	109.81
Huron	295	19	145	184	643	335	4	5	0	0.00
Ingham	1,761	199	203	753	2,916	2,085	71	72	288	102.83
Ionia	272	41	155	93	561	274	18	19	32	49.71
Jackson	811	64	122	102	1,099	933	38	21	68	41.72
Kalamazoo	1,503	69	330	213	2,115	1,598	53	43	105	43.62
Kent	3,587	346	272	1,201	5,406	3,700	97	89	373	62.81
Lapeer	405	48	62	79	594	453	15	13	21	22.70
Lenawee	616	79	484	80	1,259	659	29	24	73	71.73
Livingston	744	54	156	115	1,069	840	34	31	85	47.88
LMAS	411	20	177	57	665	481	6	5	14	37.97
Macomb	4,251	184	375	1,742	6,552	4,435	159	142	386	46.92
Marquette	510	29	94	305	938	527	15	5	39	60.12
Midland	583	79	112	67	841	841	38	21	30	35.45
Mid-Michigan	944	99	223	332	1,598	1,035	29	22	10	5.72
Monroe	885	53	184	122	1,244	930	35	26	110	72.11
Muskegon	887	120	192	478	1,677	1,108	49	39	181	103.78
Northwest	988	41	229	269	1,527	1,133	31	30	26	23.86
Oakland	8,616	1,252	1,212	4,725	15,805	9,868	357	319	1,125	92.72
Ottawa	1,114	88	201	557	1,960	1,099	35	29	86	38.25
Saginaw	1,313	60	537	330	2,240	2,237	43	34	104	49.75
Sanilac	242	2	59	16	319	278	7	6	6	13.38
Shiawassee	232	18	71	22	343	238	9	6	9	12.31
St. Clair	1,193	49	228	248	1,718	1,036	38	37	83	48.56
Tuscola	296	29	136	173	634	280	9	12	11	18.76
VanBuren-Cass	567	26	124	50	767	750	14	12	14	10.74
Washtenaw	2,166	96	545	522	3,329	2,152	118	101	184	54.25
Wayne	6,300	365	536	3,448	10,649	6,665	183	184	331	29.66
Western UP	713	6	195	85	999	724	23	18	18	25.33
Totals	58,265	5,035	10,870	19,916	94,086	62,906	2,288	1,770	5,010	49.54
Average	1,267	109	236	433	2,045	1,463	50	38	109	47
Median	738	55	183	178	1,166	858	31	23	70	44
Minimum	232	2	41	16	319	43	4	5	0	0
Maximum	8,616	1,252	1,212	4,725	15,805	9,868	357	319	1,125	183

APPENDIX II- Output Data - Licensing by LHD

Michigan Local Health Department Quarterly Reports Summary 2007														
	ENFORCEMENT CONDUCTED		LICENSED FACILITIES											
	11. Administrative Action: office conference, informal conference, formal hearing, civil fines, orders	12. Court Action: civil, criminal	Licensed Fixed Food Establishments	Fixed Licenses- % of Total Fixed Licenses	Licensed Mobile Establishments	Mobile Licenses- % of Total Mobile Licenses	Licensed STFU Establishments	STFU Licenses- % of Total STFU Licenses	Licensed Vending Establishments	Vending Licenses- % of Total Vending Licenses	Licensed Temporary Establishments (Number of temporary inspections used to equal # of Licenses)	Temporary Licenses- % of Total Temporary Licenses	Total Licensed Establishments excluding temporary)	Fixed Food Establishments per 100,000 people
Allegan	0	0	316	1	2	0	40	6	27	1	70	1	385	300
BEDHD	10	0	501	2	6	1	12	2	63	1	165	2	582	301
Bay	10	0	399	1	2	0	2	0	20	0	133	1	423	364
Benzie-Leelanau	0	0	184	1	3	1	0	0	4	0	148	1	191	464
Berrien	5	0	630	2	8	2	3	0	72	2	300	3	713	386
BHSJ	6	0	497	2	4	1	32	5	104	2	242	2	637	317
Calhoun	1	0	489	2	7	1	11	2	81	2	196	2	588	352
CMDHD	3	0	664	2	2	0	33	5	35	1	281	3	734	348
Chippewa	5	1	192	1	1	0	1	0	5	0	41	0	199	495
Delta-Menominee	11	0	261	1	0	0	9	1	21	0	181	2	291	411
Detroit City	100	0	1793	6	139	26	5	1	408	9	510	5	2345	199
Dickinson-Iron	4	0	212	1	1	0	1	0	14	0	51	0	228	531
DHD # 2	8	0	331	1	0	0	8	1	8	0	173	2	347	474
DHD # 4	5	0	415	1	2	0	9	1	6	0	92	1	432	501
DHD # 10	12	2	937	3	5	1	26	4	86	2	490	5	1054	353
Genesee	17	0	1293	4	13	2	22	3	56	1	314	3	1384	291
Grand Traverse	1	0	323	1	12	2	16	2	53	1	62	1	404	390
Holland City	1	0	134	0	0	0	7	1	56	1	62	1	197	387
Huron	9	0	176	1	1	0	13	2	19	0	145	1	209	504
Ingham	101	0	953	3	0	0	88	13	81	2	203	2	1122	340
Ionia	1	0	166	1	0	0	13	2	25	1	155	1	204	258
Jackson	11	0	463	1	0	0	12	2	65	1	122	1	540	284
Kalamazoo	19	0	786	2	5	1	27	4	102	2	330	3	920	327
Kent	124	0	1808	6	42	8	34	5	477	10	272	3	2361	304
Lapeer	2	0	235	1	2	0	13	2	27	1	62	1	277	254
Lenawee	14	0	337	1	4	1	0	0	68	1	484	4	409	331
Livingston	3	0	409	1	12	2	13	2	55	1	156	1	489	230
LMAS	5	0	268	1	3	1	3	0	7	0	177	2	281	727
Macomb	136	0	2348	7	29	5	15	2	394	8	375	3	2786	285
Marquette	52	0	258	1	0	0	5	1	22	0	94	1	285	398
Midland	1	0	263	1	2	0	18	3	18	0	112	1	301	311
Mid-Michigan	24	0	529	2	1	0	27	4	80	2	223	2	637	303
Monroe	4	0	492	2	1	0	39	6	0	0	184	2	532	323
Muskegon	24	0	564	2	14	3	33	5	165	4	192	2	776	323
Northwest	0	0	647	2	3	1	6	1	35	1	229	2	691	594
Oakland	85	0	3904	12	132	25	10	1	635	14	1,212	11	4681	322
Ottawa	129	0	558	2	0	0	4	1	141	3	201	2	703	248
Saginaw	52	0	660	2	2	0	6	1	124	3	537	5	792	316
Sanilac	4	0	155	0	1	0	8	1	23	0	59	1	187	346
Shiawassee	0	0	196	1	0	0	13	2	19	0	71	1	228	268
St. Clair	28	0	489	2	1	0	7	1	98	2	228	2	595	286
Tuscola	4	0	151	0	0	0	5	1	23	0	136	1	179	257
VanBuren-Cass	0	0	377	1	2	0	5	1	30	1	124	1	414	289
Washtenaw	51	0	1125	4	35	7	16	2	278	6	545	5	1454	332
Wayne	334	0	3423	11	31	6	16	2	554	12	536	5	4024	307
Western UP	21	0	393	1	1	0	2	0	5	0	195	2	401	553
Totals	1,437	3	31,704	XXX	531	XXX	688	XXX	4,689	XXX	10,870	XXX	37,612	XXX
Average	31	0	689	XXX	12	XXX	15	XXX	102	XXX	236	XXX	818	314
Median	9	0	439	XXX	2	XXX	12	XXX	54	XXX	183	XXX	511	325
Minimum	0	0	134	0	0	0	0	0	0	0	41	0	179	199
Maximum	334	2	3,904	12	139	26	88	13	635	14	1,212	11	4,681	727

APPENDIX III- Program Staffing- Program Revenue by LHD

Michigan Local Health Department Quarterly Reports Summary 2007													
	IMPORTANT FACTOR IV STAFFING						FINANCIAL						
	13. Total number of FTE's assigned to the food program in the following areas: plan review, supervision, coordination, clerical	14. Total number of FTE's assigned to conduct food establishment inspections (all types)	Total FTE's	Minimum Inspection Staffing per FDA	Recommended Inspection Staffing per FDA	Average Number of Inspections per FTE Assigned to Conduct Food Establishment Inspections	Fees Collected	Local Tax Dollars	LPHO Dollars	Total Program Revenue	Program Dollars per Licensed Establishment	Program Dollars per FTE	Program Dollars per Citizen
Allegan	0.70	1.80	2.5	1.9	2.8	397	95,000	93,116	89,185	277,301	720	110,920	2.63
BEDHD	2.00	3.10	5.1	3.1	4.4	409	197,228	150,984	129,927	478,139	822	93,753	2.87
Bay	0.50	2.10	2.6	2.3	3.3	450	116,150	21,001	93,481	230,632	545	88,705	2.11
Benzie-Leelanau	1.50	0.80	2.3	1.3	1.8	748	61,974	32,909	41,974	136,857	717	59,503	3.45
Berrien	1.00	4.50	5.5	4.2	5.8	379	130,000	27,870	157,384	315,254	442	57,319	1.93
BHSJ	1.20	4.00	5.2	3.6	5.1	385	187,000	57,887	132,203	377,090	592	72,517	2.40
Calhoun	1.50	3.00	4.5	3.3	4.6	395	226,524	41,186	184,678	452,388	769	100,531	3.25
CMDHD	2.00	3.37	5.37	4.2	5.8	559	232,251	73,895	117,101	423,247	577	78,817	2.22
Chippewa	1.56	1.36	2.92	1.0	1.5	307	59,650	83,114	44,868	187,632	943	64,258	4.84
Delta-Menominee	0.80	1.70	2.5	1.9	2.5	674	93,000	30,734	52,971	176,705	607	70,682	2.78
Detroit City	5.00	10.00	15	12.1	17.3	428	983,486	123,473	522,380	1,629,339	695	108,623	1.81
Dickinson-Iron	0.40	1.15	1.55	1.2	1.7	476	64,000	616	54,732	119,348	523	76,999	2.99
DHD # 2	2.14	0.77	2.91	2.1	2.9	732	81,076	54,892	83,367	219,335	632	75,373	3.14
DHD # 4	3.05	2.60	5.65	2.2	3.2	377	130,000	43,517	81,467	254,984	590	45,130	3.08
DHD # 10	0.75	5.50	6.25	6.3	8.7	444	236,903	269,295	219,452	725,650	688	116,104	2.73
Genesee	5.20	9.50	14.7	7.2	10.3	312	625,736	647,167	464,911	1,737,814	1,256	118,219	3.91
Grand Traverse	0.70	2.00	2.7	2.0	2.9	429	134,500	40,844	82,998	258,342	639	95,682	3.12
Holland City	0.00	0.10	0.1	1.1	1.5	5,870				0	0	0.00	34,606
Huron	0.22	1.07	1.29	1.4	1.9	601	69,810	18,076	34,218	122,104	584	94,654	3.49
Ingham	3.90	7.90	11.8	5.7	8.2	369	500,000	234,044	218,193	952,237	849	80,698	3.40
Ionia	0.30	0.96	1.26	1.4	1.9	584	48,850	41	53,000	101,891	499	80,866	1.58
Jackson	1.70	1.60	3.3	2.8	4.0	687	182,287	80,452	123,392	386,131	715	117,009	2.37
Kalamazoo	3.00	3.00	6	5.2	7.2	705	269,100	135,744	215,263	620,107	674	103,351	2.58
Kent	4.32	9.00	13.32	11.4	16.6	601	488,000	252,942	350,443	1,091,385	462	81,936	1.84
Lapeer	1.30	1.75	3.05	1.4	2.1	339	94,188	36,121	76,257	206,566	746	67,727	2.23
Lenawee	2.30	1.40	3.7	3.4	4.3	899	141,046	37,206	107,537	285,789	699	77,240	2.81
Livingston	2.00	3.25	5.25	2.7	3.8	329	300,348	62,899	118,532	481,779	985	91,767	2.71
LMAS	2.46	1.38	3.84	1.8	2.5	482	121,264	13,120	125,699	260,083	926	67,730	7.05
Macomb	6.00	15.00	21	13.6	19.8	437	484,025	663,719	567,080	1,714,824	616	81,658	2.08
Marquette	0.70	1.60	2.3	1.6	2.2	586	108,965	29,208	60,678	198,851	698	86,457	3.07
Midland	1.80	1.40	3.2	1.7	2.4	601	66,481	61,424	70,524	198,429	659	62,009	2.35
Mid-Michigan	5.10	10.50	15.6	3.6	5.0	152	160,303	136,037	238,003	534,343	839	34,253	3.06
Monroe	0.40	1.30	1.7	3.0	4.2	957	124,000	125,281	79,850	329,131	619	193,606	2.16
Muskegon	2.65	3.20	5.85	4.1	5.8	524	278,615	124,823	103,461	506,899	653	86,649	2.91
Northwest	2.50	3.25	5.75	3.8	5.4	470	200,000	211,560	88,440	500,000	724	86,957	4.59
Oakland	15.60	24.00	39.6	24.8	35.2	659	724,080	1,579,965	853,593	3,157,638	675	79,738	2.60
Ottawa	2.40	3.30	5.7	3.8	5.4	594	253,765	230,000	143,339	627,104	892	110,018	2.79
Saginaw	2.80	3.10	5.9	5.3	7.1	723	217,978	61,195	266,664	545,837	689	92,515	2.61
Sanilac	0.54	0.75	1.29	1.0	1.4	425	50,777	0	48,661	99,438	532	77,084	2.22
Shiawassee	0.60	0.80	1.4	1.3	1.8	429	58,135	25,100	66,992	150,227	659	107,305	2.05
St. Clair	1.00	4.00	5	3.4	4.7	430	125,000	190,677	167,906	483,583	813	96,717	2.83
Tuscola	0.18	0.92	1.1	1.2	1.6	689	49,670	6,172	42,481	98,323	549	89,385	1.68
VanBuren-Cass	1.40	1.80	3.2	2.3	3.2	426	86,600	135,522	96,459	318,581	770	99,557	2.44
Washtenaw	4.10	7.40	11.5	8.3	11.5	450	604,967	273,562	277,653	1,156,182	795	100,538	3.41
Wayne	11.00	19.00	30	19.7	28.6	560	2,093,400	1,832,551	1,096,349	5,022,300	1,248	167,410	4.50
Western UP	1.63	1.42	3.05	2.4	3.3	704	130,925	9,879	101,867	242,671	605	79,564	3.41
Totals	111.90	191.40	303	203	287	29,180	11,687,057	8,359,820	8,345,613	28,392,490	31,930	4,027,531	XX
Average	2.43	4.16	7	4	6	492	259,712	185,774	185,458	617,228	755	93,612	2.81
Median	1.67	2.35	4	3	4	473	134,500	62,899	107,537	323,856	682	86,553	2.76
Minimum	0.00	0.10	0	1	1	152	48,850	0	34,218	0	0	0.00	34,606
Maximum	15.60	24.00	40	25	35	5,870	2,093,400	1,832,551	1,096,349	5,022,300	1,256	193,606	7.05

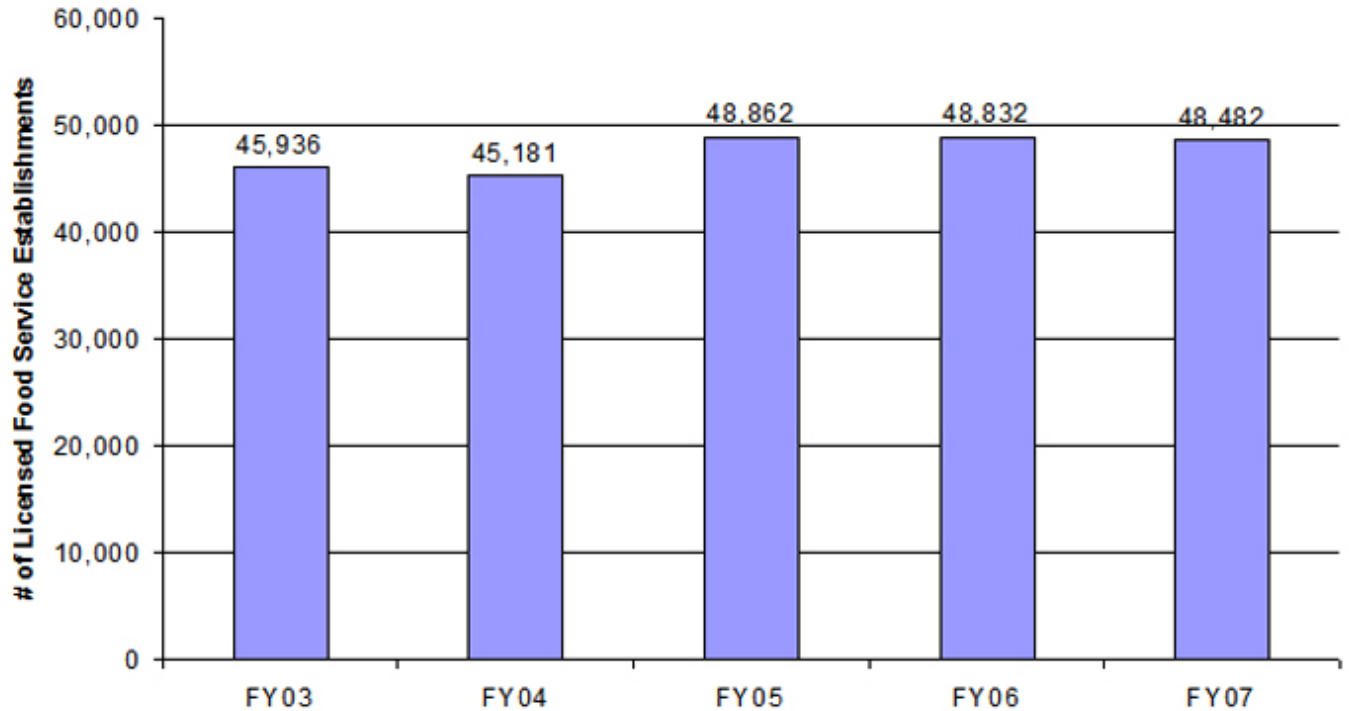
APPENDIX IV- Foodborne Illness Outbreaks by LHD

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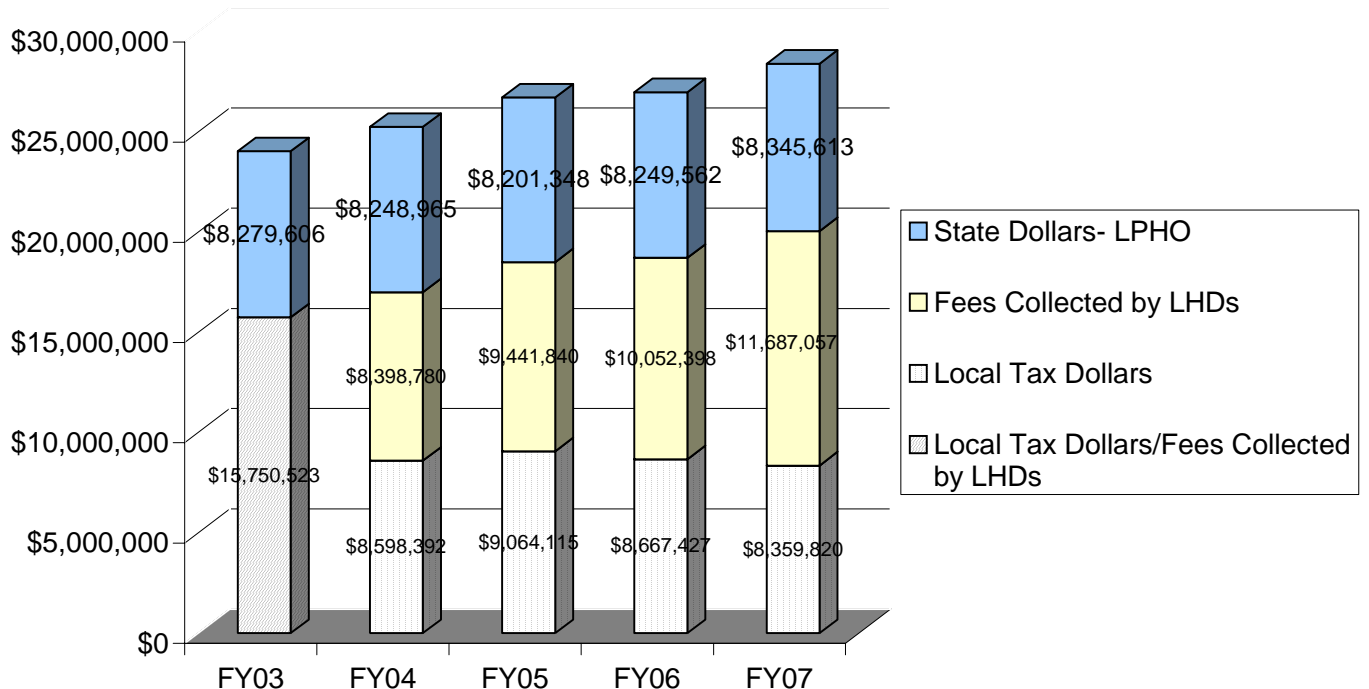
APPENDIX V- Five Year Trend Analysis Charts

LOCAL HEALTH DEPARTMENTS

Licensed Food Service Establishments(LHD), Five-Year Comparison



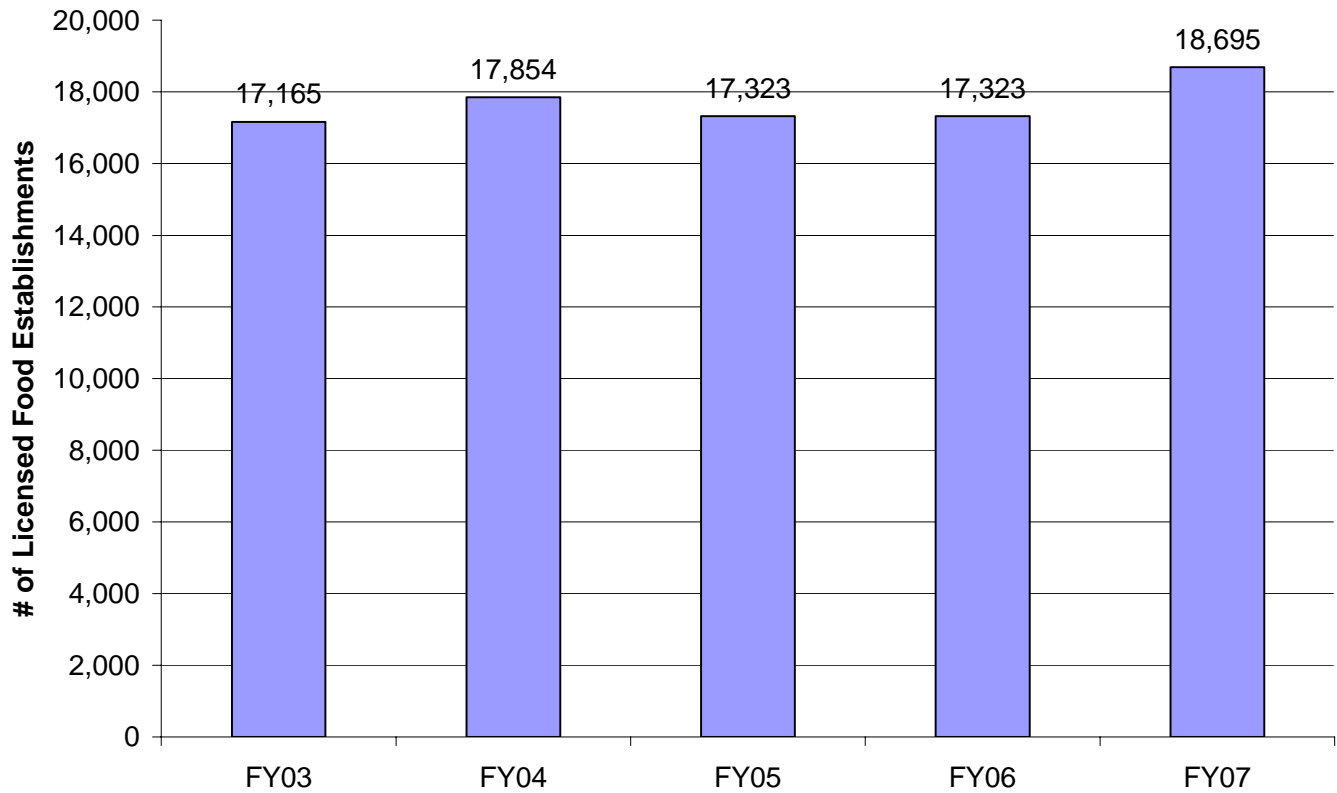
LHD Funding Sources, Five-Year Comparison



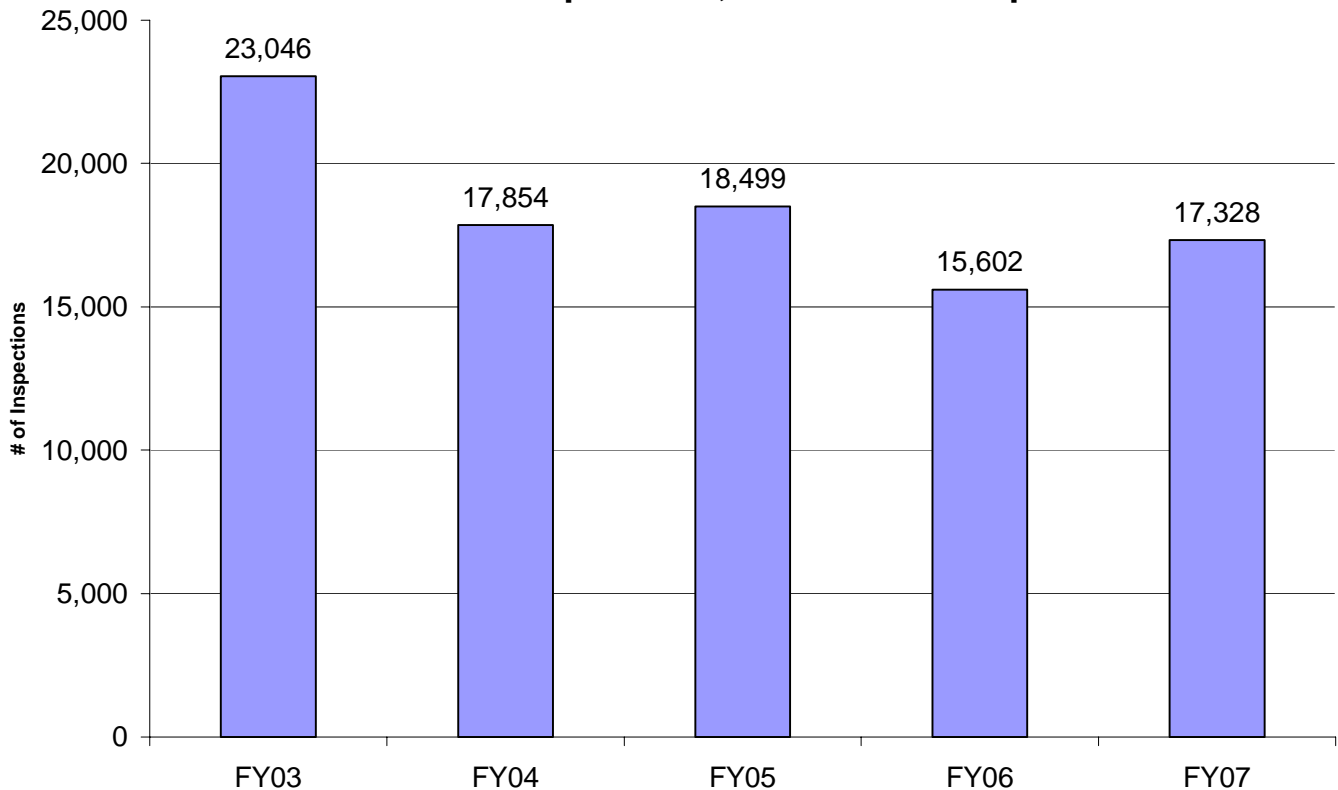
Note: Prior to FY 04, fees collected by LHDs and local tax dollars were reported as a combined figure.

MDA – Food Section

Licensed Food Establishments (MDA), Five-Year Comparison

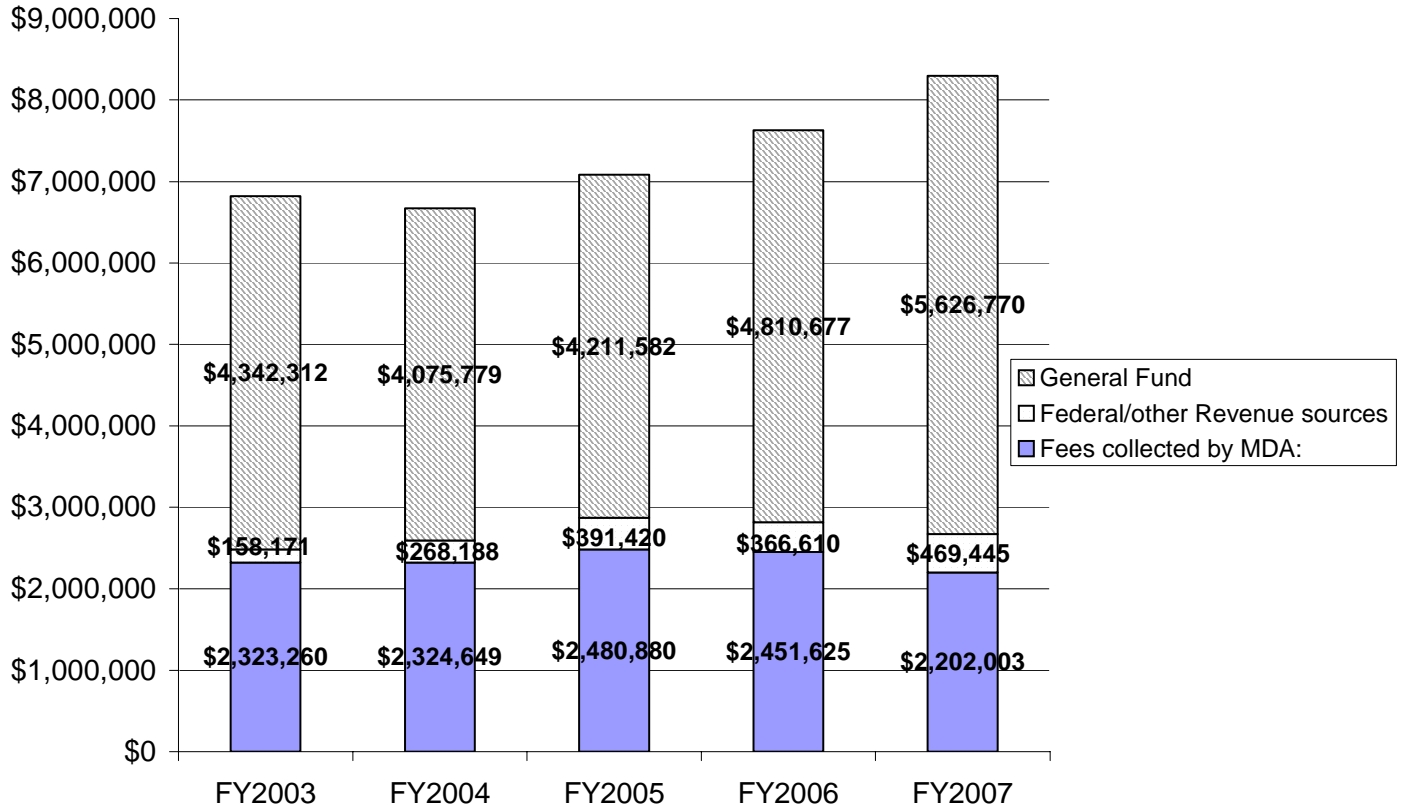


Number of Food Inspections, Five-Year Comparison



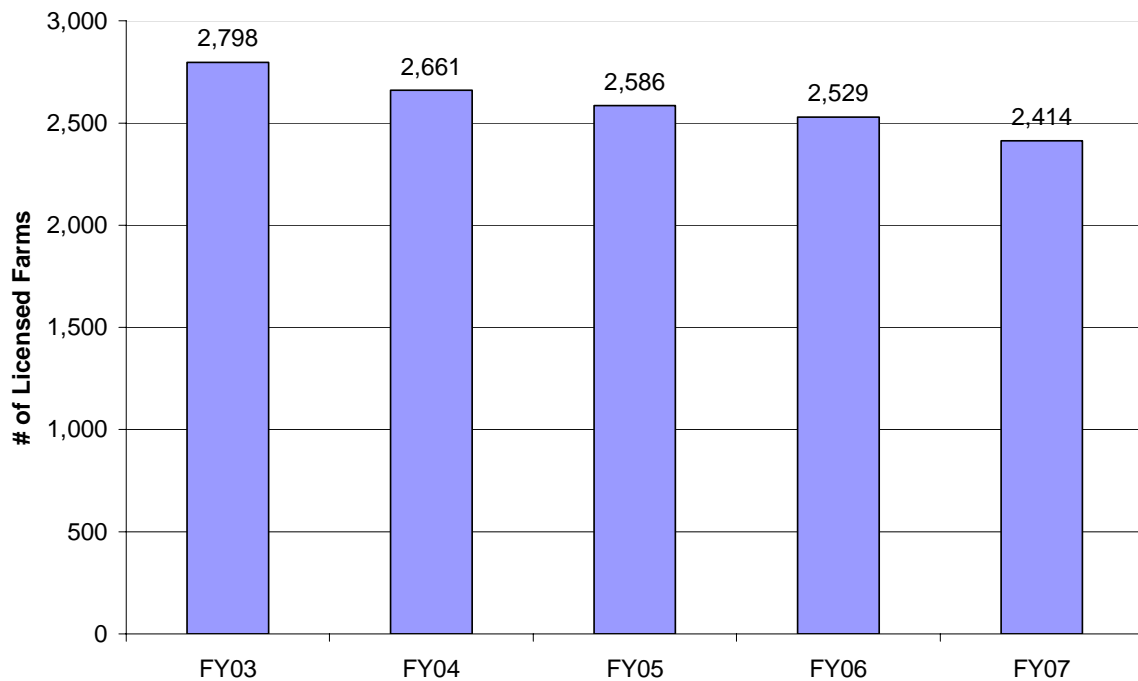
Note: Fair inspections are not included in the food inspection counts for this graph.

MDA Food Funding Sources, Five-Year Comparison

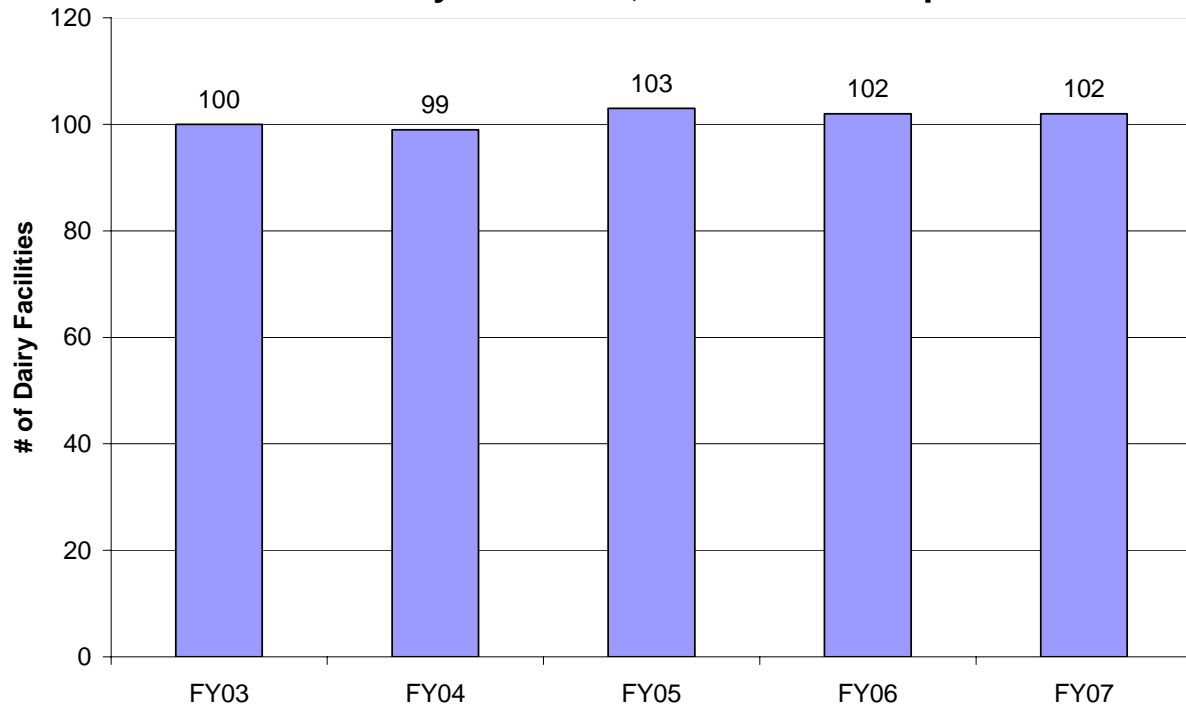


MDA – Dairy Section

Licensed Dairy Farms, Five-Year Comparison

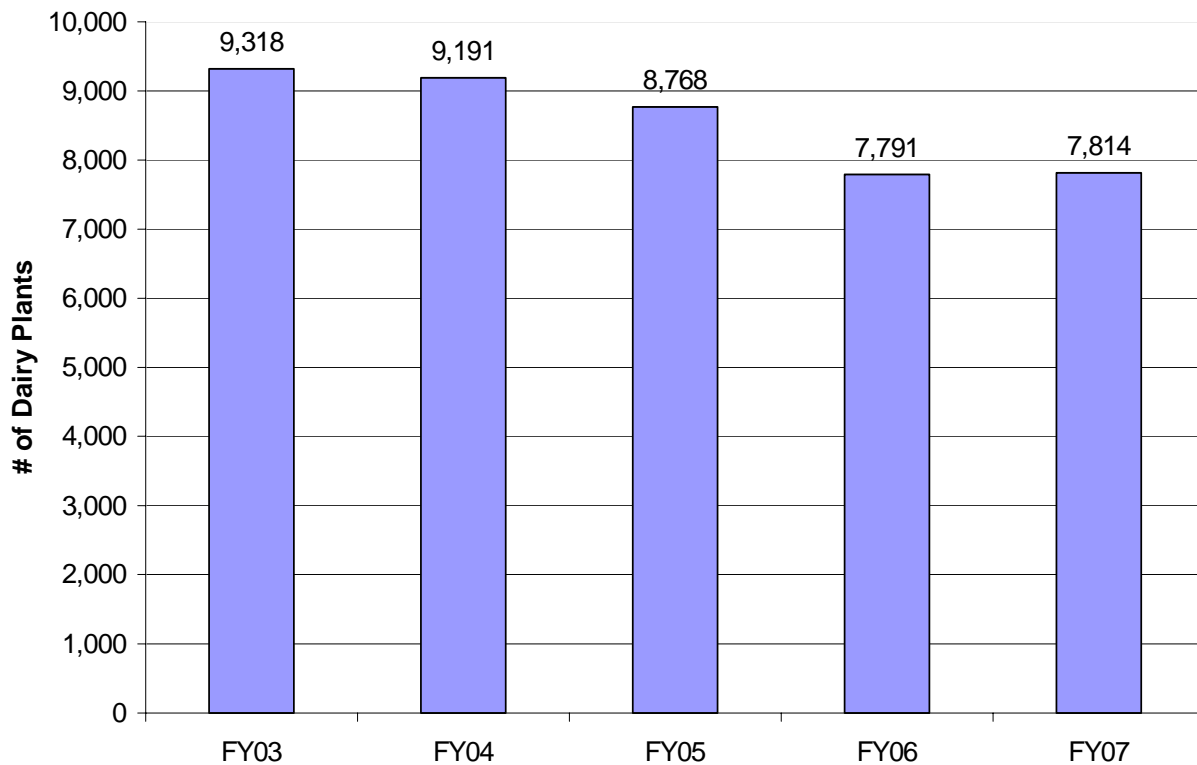


Licensed Dairy Facilities, Five-Year Comparison



Licensed Facilities Includes: Grade A Plants, Manufacturing Plants, Grade A Milk Distributors, Grade A Transfer Stations/Receiving Stations/Tank Truck Cleaning and Grade A Single Service.

Dairy Inspections, Five-Year Comparison



Inspections include: Farm, Plant, Hauler/Sampler/Tanker, Pasteurization, USDA Survey and Grade A Survey.

MDA Dairy Funding Sources, Five-Year Comparison

